



PUBLIC HEALTH DEPARTMENT,
GUILDHALL, CAMBRIDGE.

April 4th, 1935.

*To the Chairman and Members of the Local Education
Authority.*

MR. CHAIRMAN, LADIES AND GENTLEMEN,

I have the honour to present for your consideration the 27th Annual Report upon the medical inspection of the elementary school children in Cambridge.

This year is notable for the appointment of a third whole-time dentist. Dental work in the schools was definitely falling into arrears, and owing to this it became necessary to curtail seriously what is required for the pre-school child and the expectant and nursing mother. With a third dentist arrears of school work will soon be overtaken, and the full scheme for the work of the Maternity and Child Welfare Committee can again be resumed.

The great increase in the numbers of children having milk in school is another notable feature of the year. The greatest credit is due to the school teachers, who have contributed so much to the success of this scheme, and whose enthusiastic reports of the results are so encouraging.

Another interesting happening during the year was the appointment of two Instructors of Physical Education, who took up their work in September, 1934.

With regard to infectious disease, the Committee will note with satisfaction that only two cases of diphtheria occurred in the schools. It is difficult to get parents to have their children immunised against this disease in the absence of any alarm, but the numbers done have doubled in 1934, and every effort is made to get parents to avail themselves of the facilities offered for the protection of their children.

In the preparation of the report I am greatly indebted to Dr. Smyth for much of the text, and to Mr. Lambert and Miss Wallis for the statistical part.

I am,

Your obedient Servant,

ANDREW J. LAIRD,

School Medical Officer.

MEMBERS OF THE HYGIENE SUB-COMMITTEE OF THE EDUCATION COMMITTEE.

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INDEX.

PAGE

NUMBER OF SCHOOLS, ETC.	4
STAFF	4
COST OF MEDICAL SERVICES	5
GENERAL REVIEW	5
GROUPS OF CHILDREN INSPECTED	6
CO-OPERATION OF PARENTS	7
REVIEW OF THE FACTS DISCLOSED BY INSPECTION :	
Children found at Routine Inspection to require treatment	7
General Physique	8
Heights and Weights	8
Nutrition	8
Cleanliness and Clothing	10
Ringworm	10
Tonsils and Adenoids	10
Defective Vision	10
Cripples and Deformities	10
Ear Disease and Deafness	11
Other Defects	11
Vaccination	11
INSPECTION CLINIC	11
EXAMINATIONS FOR PHYSICAL OR MENTAL DEFECTS. ...	11
INFECTIOUS DISEASES AMONG ELEMENTARY SCHOOL CHILDREN	12
DEATHS OF ELEMENTARY SCHOOL CHILDREN	13
SCHOOL CLOSURE	13
DIPHTHERIA IMMUNISATION	13
TREATMENT OF DEFECTS :	
Addenbrooke's Hospital	13
School Clinic	14
EYE CLINIC	14
WORK OF THE SCHOOL NURSES	14
OPEN AIR SCHOOL :	
Delicate and Physically Defective Children	15
Light treatment	16
TUBERCULOSIS IN SCHOOL CHILDREN	16
INSTITUTIONAL CARE	16
SUPERVISION BY THE TUBERCULOSIS OFFICER	17
VOLUNTARY AGENCIES	17
MILK AND COD LIVER OIL	18
TEACHING OF HYGIENE	18
CHILD GUIDANCE CLINIC	19
EMPLOYMENT OF SCHOOL CHILDREN	20
PHYSICAL EDUCATION	20
APPENDIX : OFFICIAL TABLES	20

Report of the School Medical Officer

FOR THE YEAR 1934.

Population of the Borough (estimated 1934)	...	72,780
Area of the Borough...	...	10,057 acres
Number of Elementary Schools	...	23
Number of Departments	...	35

<i>Year ended March 31st.</i>	1926	1927	1928	1929	1930	1931	1932	1933	1934
Average number of children on registers...	7126	7060	6924	6823	6805	6858	7141	7251	7273
Average number of children in attendance	6388	6273	6266	6065	6170	6256	6446	6566	6581

Staff.—

School Medical Officer...	...	Andw. J. LAIRD, M.D., C.M., D.P.H.
Assistant School Medical Officer		Arthur J. SMYTH, M.B., B.Ch., D.P.H.
Public Dental Officer	...	W. Baird GRANDISON, L.D.S., R.C.S.
Assistant Public Dental Officers		C. HARRIS, L.D.S. (Commenced January 1st, 1934) R. B. PICKLES, L.D.S. (Commenced September 1st, 1934)
Bacteriologist	... ..	W. H. HARVEY, M.D. (Part time)
School Nurses	... ..	Miss M. M. W. STEVENS Miss F. A. NICHOLLS Miss T. GIBBONS
Dental Attendants	... ..	Miss D. MALLETT Miss E. IMPEY Miss ALLENSBY
Clerk	... ..	Miss G. A. M. WALLIS

together with the part-time services of the Chief Clerk in the Public Health Department.

Cost of Medical Services.—It has been stated frequently that the cost of this work in Cambridge is above that of other comparable areas. If, however, this report is carefully examined, together with the figures of cost, it will be seen that the higher figure in Cambridge is not due to extravagance, but to the fact that we are better equipped, especially in our dental department and open air education, than districts where those very important services are not yet in existence or not so fully developed.

The expenditure for the year ended March 31st, 1934, was :—

	£	s.	d.
Medical inspection and treatment ...	2726	18	6
Dental inspection and treatment ...	2370	4	0
Open Air School	3729	0	2

The annual cost per child on the school registers was 14/- gross. The cost in terms of a penny rate was 2d. gross and 1.91d. nett.

GENERAL REVIEW OF THE WORK OF THE SCHOOL MEDICAL SERVICES IN CAMBRIDGE.

On April 1st, 1934, the Cambridge Borough (Extension) Order, 1934, came into operation. As a result the total population was increased from 68,180 in 1933 to 72,780 in 1934, while the area of the Borough was increased from 5,457 acres to 10,057 acres.

With the added areas (Cherry Hinton and Trumpington) two public elementary schools were taken over, in which on the 1st of April, 1934, there were 182 and 125 children respectively.

The change in the Borough was thus not so much one of numbers as of distance from the Central Clinics and the Open Air School. This difficulty has been overcome by special arrangements which have been made with regard to transport.

With regard to the staff, the only changes during the year were in the Dental Department. The vacancy created by the resignation of Dr. Cruickshank in September, 1933, was filled temporarily until the end of 1933, and permanently in January, 1934 by the appointment of Mr. C. Harris. In September, 1934, the third Dentist, Mr. R. B. Pickles, entered upon his duties.

The effect of Dr. Cruickshank's sickness and subsequent resignation is clearly shown in Mr. Grandison's Annual Report upon the dental work for 1933. It is now confidently predicted by Mr. Grandison, that as a result of the strengthening of this important department the arrears will have been overtaken by the end of 1935.

With regard to future developments it is pointed out in the Annual Report for 1933 of the Chief Medical Officer of the Board of Education that the work of the School Medical Service, since its inauguration in 1907, has been concerned mainly with the detection and remedy of

defects and the treatment of the sub-normal child, and the question which Education Authorities are now asked to answer is "are we doing all that is possible for the nutrition, physical education, nurture and health of the normal child?"

It must be admitted at once that before an affirmative answer can be given to that question much more will be required than "the automatic and mechanical discharge of the minimum duty of mere inspection and treatment." Not only must the environment provided at school be all that is desired, but the child must be trained in the way of healthy living. Without making any excessive claims in this matter, there is undoubtedly distinct evidence that a movement in this direction has begun. It is to be found not only in the great improvement in the design of new schools and the closure of old ill-fashioned ones, but also in the commencement made with the inspection of the pre-school child, the provision of milk in school for all children, the teaching of hygiene, the arrangements made for physical exercises and games, and the greatly improved scheme of dental inspection and treatment of all children from their earliest years up to the time they leave school.

Groups of Children Inspected.—The groups selected for routine inspection were (1) first admissions to the public elementary schools; (2) those attaining the age of eight years, and (3) those attaining the age of twelve years; groups usually referred to as "entrants," "intermediates" and "leavers."

In addition, a large group composed of children selected for inspection for some special reason, and others who were being kept under observation for some defect detected at a previous examination, were also inspected during the year.

The numbers examined belonging to the three routine groups are shown below.

Routine Cases :	Boys	Girls.	Total.
Entrants ...	341	335	676
Intermediates ...	355	306	661
Leavers ...	373	373	746
	<hr/>	<hr/>	<hr/>
	1069	1014	2083
	<hr/>		

Special Inspections, 3713; re-inspections, 1414.

The number at routine inspections represents 32 per cent. of the number of children in average attendance.

The fluctuations in the routine groups from 1927 are shown below :—

		1927	1928	1929	1930	1931	1932	1933	1934
Entrants	...	719	700	683	759	602	691	703	676
Intermediates	...	506	841	842	741	733	706	699	661
Leavers	...	698	600	590	470	490	835	788	746
Totals	...	1923	2141	2115	1970	1825	2232	2190	2083

The following Table shows the number of routine inspections carried out at the various schools :—

	Entrants.		Intermediates		Leavers.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Brunswick Council ...	42	35	47	37	59	60
Central ...	—	—	—	—	76	91
Milton Road ...	33	34	43	37	25	37
Morley Memorial ...	28	29	29	21	—	21
Newnham Croft ...	6	4	8	7	—	—
New Street ...	10	10	14	11	—	—
Park Street ...	10	16	13	10	—	—
Richmond Road ...	18	12	2	5	—	—
Romsey Council ...	—	—	13	15	49	17
St. Andrew's ...	—	—	33	37	—	—
St. Barnabas ...	15	11	19	13	—	—
St. George's ...	—	—	—	—	54	51
St. Giles' ...	4	3	1	1	—	—
St. Luke's ...	14	30	32	27	53	41
St. Matthew's... ..	14	20	13	18	—	—
St. Paul's ...	13	14	12	15	—	—
St. Philip's ...	40	37	39	22	44	43
Sedley ...	23	27	19	7	—	—
Shirley ...	57	41	—	1	—	—
Union Road R.C. ...	6	1	6	5	5	7
Cherry Hinton ...	1	7	6	5	7	4
Trumpington ...	7	4	6	2	1	1
	341	335	355	306	373	373
	676		661		746	

Co-operation of Parents.—The percentage of parents present at the routine inspections was 80.4, being a trifle lower than the previous year, and varied from 49 per cent. to 96 per cent.

REVIEW OF THE FACTS DISCLOSED BY INSPECTION.

The defects noted at both " routine " and " special " inspections will be found in Table IIA, page 21.

The total number of "defects" found to require treatment was 1834, and the total number found requiring to be kept under observation was 975.

The number of " individual children " found at routine inspection to require treatment was 272 or 13.0 per cent. of the children examined in the three routine groups.

Among the " entrants " the percentage requiring treatment was 9.6, and among the " intermediates " and " leavers," 14.8 and 14.6 per cent. (Table IIB.)

The total number of children with no defects was 1134, or 54.4 per cent. of the number examined at routine medical inspection.

Before making any comparison of the percentage of defects in the three age groups, it should be borne in mind that the vision of " entrants " is not tested.

The average height and weight of the children are set out below, and show practically no departure from the previous year.

Boys.

Age in Years.	No. Examined in 1934.	Average Height in Inches.					Average Weight in Pounds.				
		1912	1931	1932	1933	1934	1912	1931	1932	1933	1934
5	192	40.5	42.39	42.65	42.67	42.55	38.2	41.23	42.63	41.54	41.37
8	344	46.4	49.23	49.08	48.94	48.81	47.6	56.31	56.33	55.88	57.01
12	351	54.9	56.37	56.40	56.80	56.31	72.9	79.37	82.63	80.42	81.84

GIRLS.

Age in Years.	No. Examined in 1934.	Average Height in Inches.					Average Weight in Pounds.				
		1912	1931	1932	1933	1934	1912	1931	1932	1933	1934
5	190	40.5	42.34	41.99	42.15	41.89	37.6	39.32	40.92	40.33	39.53
8	295	46.0	48.95	48.87	48.77	49.24	49.7	54.55	55.61	54.47	54.93
12	349	55.3	57.29	57.26	57.23	57.37	71.3	83.76	83.59	83.97	83.97

Nutrition.—It is no easy matter to estimate accurately the condition of a child. As Professor H. A. Harris, of University College Hospital, London, says : “ there is no single feature which may be regarded as a safe index of the condition of a child. The summation of features noted by the most careful observer is not infallible.”

The Board of Education suggests that the following classification of the nutrition of children should be adopted :—A, Excellent. B, Normal. C, Slightly subnormal. D, Bad.

It suggests that “ it is the general impression which decides the issue.” This general impression must vary considerably with the individual observer’s standards, experience, and state of mind. There is no scientific norm with which to compare a particular child. If our standard is “ perfection,” there can be no doubt that most children will fall very far short of that standard.

One hundred and seventy-two children seen at routine and special examinations during the year were classified as below normal nutrition. Of these 18 were regarded as definitely “ badly nourished ” (group D).

In an attempt to discover some of the underlying causes of malnutrition in these children, the following nine points were investigated :—1, Age. 2, Nutrition Quotient*. 3, Illness. 4, School Attendance. 5, Diet. 6, Sleep. 7, Housing. 8, Employment of Parents. 9, Gain in weight per annum.

*The Nutrition Quotient= $\frac{\text{Weight in pounds} \times 100}{\text{Height in inches}}$. This Quotient is some sort of objective measure of nutrition though it is by no means infallible.

In the case of the 18 children considered on clinical grounds to be in the Board's group (D), 11 were under 7 years of age, 16 had a nutrition quotient well below the average, 5 had suffered from recent or severe illness, and 1 showed poor attendance at school. Many had a dislike for meat and green vegetables.

According to the statements made, sleep was adequate in most cases, but it is highly probable that the information on this point is far from reliable.

In 2 of the 18 cases the housing conditions were poor, and in only 3 were the parents unemployed.

More or less detailed information was obtained regarding 105 of the 172 children, including the above-mentioned 18. It was not, however, possible to interview the parents of all of these children, and information was therefore not always reliable.

Eighty-four, or 80 per cent., of the children were under 10 years of age. In 45 the nutrition quotient was below the average for their age and height. In 17 there was a recent history of illness, in 14 a definite statement that little or no meat or greens were eaten; and in many more an impression was gained that the diet was deficient in this direction. In 23 instances it was admitted that the children went to bed too late, and this is most certainly true of many more. In 9 cases housing conditions were unsatisfactory. In 24 instances the parents were unemployed or only irregularly employed. In 45 cases the annual gain in weight was under 5 lbs. (5 lbs. is the average annual gain for a normal child).

From this rough analysis, though it only deals with very few children, it is perhaps justifiable to draw the following inferences :—

That the main factors tending to produce the under-nourished child are :—1, Insufficient meat and greens in the diet. 2, Insufficient or poor quality of sleep. 3, Unemployment of the parents and its consequences. 4, Illness, recent or severe.

It is an interesting fact that 80 per cent. of these children were under 10 years of age. Though it may not be justifiable to draw very definite conclusions from so small a number, this fact emphasizes what is rather obvious perhaps, that preventive treatment is most important among the younger children, and that milk and cod liver oil should be supplied to children under 10 years of age in particular.

In the majority of the 18 group (D) children a constitutional or hereditary factor was observable among those causes of malnutrition already mentioned. This factor was not so often to be noticed in those children noted as only slightly subnormal in nutrition.

Definitely bad nutrition then may be due rather to inherent qualities in the child than to outside circumstances, whereas in the case of slight subnormality it is more probably due to one or more of the other factors considered in this brief survey.

Cleanliness and Clothing.—The high standard of cleanliness among the elementary school children of Cambridge has been fully maintained.

The total number of individual children found unclean at school by the School Nurses during the visits they have made specially for this purpose during 1934, was 662, as compared with 674 in 1933.

The proportion found with pediculi in their heads was 1.2 per cent. In 1933 the proportion was 1.4 per cent.

No proceedings were taken under Section 122 of the Children Act, 1908, but proceedings in Court were taken under the School Attendance Bye-Laws in 6 cases, and fines from 2/6 to 10/- were inflicted in 5 of these, and 1 was dismissed with a caution.

Ringworm.—Only 5 new cases occurred, 4 of the body and 1 of the scalp. Two were treated at Addenbrooke's Hospital, 2 at the Clinic, and 1 by a private practitioner. There were no cases at the end of the year.

The new cases discovered each year from 1922 were as follows :—

1922	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34
37	24	26	15	11	14	16	2	9	12	5	3	5

Tonsils and Adenoids.—389 children (18.7 per cent.) had considerably enlarged tonsils, and 1 (0.1 per cent.) had slightly enlarged tonsils. 14 also suffered from adenoids. The number of children found to require treatment of tonsils and adenoids was 138, as compared with 119 in 1933.

Cripples and Deformities.—The defects found include :—flat foot, 72; after effects of rickets, 17; spinal curvature, 12; round shoulders, 9; bad posture, 6; knock knees, 5; flat chest, 4; over-riding toes, 4; depressed sternum, 4; deformed hands and feet, 2; defective toes, 2; pigeon chest, 2; cleft palate, 2; wry neck, 2; bowed legs, 1; tubercular hip, 2; club foot, 1; after effects of infantile paralysis, 2.

Defective Vision.—The number of children found at routine inspection to have defective vision (6/12 or worse) was 102. Of these 33 required treatment, 7 were recorded for observation and the remaining 62 had already received treatment.

In addition to the above 102 children, 67 " specials " were examined, 30 during routine inspection and 37 at the Clinic. All of these children required treatment, except 6, who were recorded for observation.

Ear Disease and Deafness.—The number of children found with defective hearing was 34, or 1.7 per cent. of those inspected. Ten had a purulent ear discharge (0.5 per cent.). The percentages for several years are given for comparison.

	1926	1927	1928	1929	1930	1931	1932	1933	1934
Otorrhoea	0.2	0.9	0.7	0.7	0.6	0.4	0.1	0.6	0.5
Deafness	2.0	3.4	3.4	3.0	1.8	1.9	0.8	2.1	1.7

Acting upon the advice of the Ear Specialist at Addenbrooke's Hospital, the Committee during the year agreed to the purchase of an Audiometer, with a view to testing the hearing of a much larger number of children than are usually seen at routine inspections, or who have been recommended by the teachers for examination on the ground of defective hearing.

Other Defects.—These include 72 children with irregular action of the heart, 13 stammerers, 14 with indication of nervous instability, and anaemia 19.

Vaccination.—The proportion of children found with vaccination marks in 1934 was 28 per cent., this being 1.0 per cent. more than the previous year.

Inspection Clinic.—The Clinic is open every weekday, including Saturdays, from 9.30 a.m. until 1 p.m. The Assistant Medical Officer, three School Nurses, and a Clerk are in attendance.

The total number of children inspected at the School Clinic during 1934 was 6,985.

The attendances in 1934 numbered 11,592, an increase of 3,437 as compared with 1933.

The average daily attendance during 1934 was 46.

Special Examinations for Physical or Mental Defects.—A number of children are examined at the Clinic who come under special groups, either physical or mental. They include the children who are receiving milk in the schools on medical grounds; those whose condition suggests the need for a period at the Open Air School, and those whose mental capacity is in question.

The children specially examined for mental defect in 1934 numbered 113 (79 boys and 34 girls). The number recommended for the Special School was 12 (10 boys and 2 girls).

The number examined for physical defects was 90 (45 boys and 45 girls). Of these 87 were recommended for the Open Air School.

INFECTIOUS DISEASES AMONG ELEMENTARY SCHOOL CHILDREN.

The following table shows the incidence of Infectious Disease among school children :—

	1926	1927	1928	1929	1930	1931	1932	1933	1934
Scarlet Fever ...	51	92	127	56	106	52	62	112	126
Diphtheria ...	66	51	79	162	49	23	12	6	2
Influenza ...	3	17	—	1	—	—	—	82	—
Measles ...	303	113	726	316	453	110	634	209	83
German Measles	607	10	24	4	5	1	2	4	11
Whooping Cough	101	246	46	126	242	82	215	202	180
Chicken Pox ...	259	297	121	195	244	213	250	196	357
Mumps ...	720	195	21	20	9	218	270	15	15
Ringworm ...	7	3	8	2	6	—	5	3	4
Scabies ...	1	1	—	1	—	—	1	3	—
Skin Diseases	14	15	16	7	13	1	12	12	19
"Pink Eye" ...	—	—	—	—	—	—	—	—	347
Others ...	121	63	78	102	74	25	71	84	66
Totals ...	2253	1103	1246	992	1201	725	1534	928	1210

An unusual feature of the year was an outbreak of "Pink Eye" (acute contagious conjunctivitis), which gave rise to a good deal of trouble, and considerably increased the attendances of children at the Minor Ailment Clinic.

The outbreak began in February and continued until July. 347 cases were treated at the Clinic, and this cannot represent the whole incidence of the disease.

A variety of organisms is said to cause this complaint, which may attack adults as well as children. The Koch-Week's bacillus, said to be the usual specific cause, was not discovered in any of the cases examined, instead, a streptococcus was found in all the swabs taken.

The treatment adopted was by means of 2 per cent. silver nitrate drops instilled into the eye on the occasion of the first visit. On subsequent visits eye drops of 5 per cent. Argyrol were used, and frequent eye baths of weak boracic lotion at home.

Towards the end of the epidemic, in June, the effect of "Essogen," a vitamin A product, was tried. 20 children received capsules of Essogen daily, and as a control 20 children were given capsules of an inert oil.

The result could not be precisely estimated, but the impression gained was that the children receiving Essogen recovered more rapidly than those on the inert oil.

Owing to the contagious nature of this disease the use of paper towels in schools was suggested. This suggestion has been carried out, experimentally, in certain schools, but has not, as yet, been under observation long enough to draw any definite conclusions.

Deaths of Elementary School Children.—The total number of deaths in Cambridge of children 5—14 years of age during 1934 was 8.

The causes of these deaths were :—Accidents, 2; Congenital Heart Disease, 2; Lobar Pneumonia, 1; Miliary Tuberculosis, 1; Whooping Cough, 1; Appendicitis, 1.

Diphtheria Immunisation.—319 children attended the Clinic during the year, of whom 269 were school children. Though a marked increase over the number immunised last year (154), it is still far too small a proportion of the school population to have any influence in controlling an epidemic, should one break out.

Two hundred and eighty-eight children underwent the Schick test, 120 of this number were inoculated in previous years. In 12 cases the test was positive. Ten of these children received further inoculations.

School Closure.—No department had an attendance below 60 per cent.

TREATMENT OF DEFECTS.

Treatment of Defects.—The total number of children treated for minor ailments was 1131, being 306 more than the previous year. In addition treatment was given to 133 for defective vision, 83 for diseases of the throat and nose, and 3,991 for dental disease, making a total of 5,388 cases treated in 1934, as compared with 4,998 in 1933.

1. *Hospital Treatment.*—Three hundred and six school children received treatment at Addenbrooke's Hospital, the conditions requiring treatment being :—Disease of the ears, 65; eyes, 11; ringworm, 2; tonsils and adenoids, 73; skin disease, 5; minor injuries, 5; various other conditions, 170; making a total of 331 defects in 306 children.

In addition, a number of children have received Light Treatment at the Hospital.

2. *Treatment at the School Clinic.*—The number of children treated at the school clinic was 595, an increase of 242 over the preceding year, while the number of attendances for treatment shows an increase from 3,314 in 1933 to 5,199 in 1934.

3. *Eye Clinic.*—One hundred and thirty-three refractions were carried out at the Eye Clinic during 1934. Lenses were prescribed in 24 cases of hypermetropic astigmatism, 18 cases of mixed conditions, 17 cases of hypermetropia, 30 cases of myopia, and 19 cases of myopic astigmatism.

In 23 cases spectacles were found to be of no benefit, and the cases were deferred for periods ranging from 3 to 6 months for further examination.

In 7 cases refraction was performed, but old glasses were retained; 1 case left the town before spectacles were prescribed, and 2 cases left school before receiving glasses. Twenty-four cases remained under observation at the end of the year.

During the year 77 children received spectacles under the Authority's scheme. 96 per cent. of the errors of refraction dealt with during the year were dealt with at the Eye Clinic.

External Eye Disease.—The conditions treated were Blepharitis 4, Squint 16, and Mybomian Cyst 1, making a total of 21. The total number of similar conditions in 1933 was 24.

WORK OF THE SCHOOL NURSES.

The total number of visits made to schools in the year was 643, of which 124 were in connection with the routine medical inspections, 278 for the cleanliness survey, 3 in connection with infectious diseases, and the remainder for various other purposes.

Two visits were paid to the schools in connection with the occurrence of Diphtheria among the scholars, and "swabbings" for bacteriological examination were taken from the throats and noses of 90 children. All gave negative results.

The "home" visits numbered 2,691 in the year; 998 for the purpose of following-up cases of defects found at routine inspections, 1,171 in connection with infectious disease, and 522 visits of enquiry as to the cause of absence of children notified as ill by Head Teachers and School Attendance Officers.

The figures in 1933 were :—Total home visits 2,525, following-up 1,053, infectious diseases 1,978 absentees 493.

OPEN AIR SCHOOL.

Delicate and Physically Defective Children.—The number on the register of the Open Air School in Milton Road at the beginning of the year was 120. During the year 83 children left and 80 were admitted, the figures for 1933 being 70 left and 77 admitted. Of the 83 children who left the school during the year, 77 returned to their ordinary schools, 2 left the town, 1 had reached school leaving age, 2 were sent to Homes, and 1 was excluded on account of epilepsy.

During the past year the work of the Open Air School has been very satisfactory. The following types of case have attended during the year :—

Bronchitis	...	...	...	...	13
Rheumatism and Rheumatic Heart...					11
Enlarged Glands	...	...	...		9
Contacts of Tuberculosis	...	...	...		16
Debility from various causes			...		45
Cripples	...	...	...	...	5
Anaemia	...	...	...	...	4
Nervous Children	...	...	...		7
Convalescence after acute illness			...		3
Sub-normal nutrition	...	...	...		2

The vast majority of the children have improved greatly in general condition.

Of special interest is the effect of the Open Air School on the nervous child. Children who appeared miserable, timid, and inarticulate, blossom into healthy, confident and happy beings under its influence.

School work is modified, and examinations, which modern educationists tell us are an evil, if a necessary one, do not loom so large on the child's horizon. This is an important factor where delicate or nervous children are concerned.

The fresh air, extra rest and good food, all assist in establishing health on a sure footing. An iron tonic with a basis of iron ammonium citrate is given to any child with the slightest suspicion of anaemia, and appears to have a very useful influence in many cases.

Every child is examined once a term at least by the Assistant School Medical Officer, and many special cases are seen more frequently.

The heart cases have all done remarkably well. Their general condition is good, and the heart in every case shows improvement. There have been no relapses.

Of the other rheumatic children, one has had a relapse, but has again recovered. The other four have done well and improved in general condition.

The case of the debilitated child was dealt with in last year's report, where it was pointed out that numerous factors contribute to their debilitated state.

Emphasis must again be laid on the fact that the Open Air School is not a school for consumptives. This idea is still prevalent and is the cause of more than one refusal to allow children to attend the Open Air School. It may be safely said that the risk of contracting a tuberculous infection is very much less at the Open Air School than at any other school in Cambridge.

LIGHT TREATMENT AT THE OPEN AIR SCHOOL.

This treatment is given three mornings a week, the period of treatment for each case varying from six weeks to four months.

The number treated during the year was 49—28 boys and 21 girls.

The conditions treated included glandular enlargements, 11; debility and anaemia, 28; bronchial conditions and colds, 6; rheumatism, 2; skin conditions, 1; nervousness, 1. All the children treated made good progress, and by the end of the year 16 had returned to the ordinary schools.

Special School.—This was formerly known as the Observation Class, but was certified as a special school under Part V of the Education Act, 1921, from September 1st, 1932.

The number in the school at the beginning of 1934 was 42. Six left and 10 were admitted, leaving 46 children in attendance at the end of 1934. Of the 6 who left, 1 had reached the age of 14, 3 were granted permission to leave, 1 was admitted to an Institution, and 1 notified to the Local Control Authority.

Institutional Care.—The number of defective children maintained in Institutions by the Education Committee during 1934 was: blind 1, deaf and dumb 6, epileptic 1, mentally defective 2, 3 heart cases and 2 orthopaedic cases.

Supervision by the Tuberculosis Officer.—The number of children reported upon by the Tuberculosis Officer during the year was 25. Two were excluded from attending school and 14 were recommended for the Open Air School.

Tuberculosis in School Children.—The number of children of school age notified to be suffering from tuberculosis each year from 1925 is shown in the following statement :—

NOTIFICATIONS RECEIVED AT AGES 5-14 YEARS DURING THE
YEARS 1925 TO 1934.

		Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.	
		Boys.	Girls.	Boys.	Girls.
1925 ...		15	13	9	5
1926 ...		10	6	6	8
1927 ...		25	13	10	6
1928 ...		9	9	3	1
1929 ...		6	6	3	6
1930 ...		3	1	2	4
1931 ...		2	2	1	2
1932 ...		—	1	2	2
1933 ...		—	—	4	3
1934 ...		—	—	2	—

Voluntary Agencies.—Every year a number of delicate children are sent for a change of air to the seaside by members of the Invalid Children's Aid and Preventive Aid Societies. 27 were sent away during 1934, and all had been examined and passed as suitable by the Assistant School Medical Officer.

Other voluntary associations which carry on work among school children, and which give most valuable help, include the Care Committee, the Central Aid Society, and the Voluntary Association for Mental Welfare. The work which they do has been mentioned in previous Annual Reports, to which reference may be made.

The Inspector of the National Society for the Prevention of Cruelty to Children gave assistance in several cases during the year.

An Occupation Centre for low grade mentally defectives established and managed by the Cambridge Voluntary Association for Mental Welfare has been in existence since 1929. The premises used are those of the old "Hope Class" in Paradise Street. Their use has been granted free of charge to the Association by the Education Committee.

It is open in the afternoons every week-day except Saturday from 2 to 4.30 p.m. The number attending at present is twenty-one; of whom only eight are boys. The number under 16 years of age is thirteen.

Cod Liver Oil.—The number of children having cod liver oil and malt in school during 1934 was 1,564, a decrease of 6 as compared with the previous year.

PROVISION OF MILK IN SCHOOL.

As a result of the scheme for increasing the demand for milk by reducing the price to $\frac{1}{2}$ d. per one-third of a pint, the number of children receiving milk in schools has shown a very considerable increase. In 1933 the number was 2,232. This rose in 1934 to 5,725, or 87 per cent. of the children in average attendance.

Of the children specially recommended for milk on medical grounds, the initial selection is made by the School Teachers, but the final selection is made as a result of a medical inspection of each child by the Assistant School Medical Officer. The resulting recommendation of the Assistant School Medical Officer is based upon medical grounds, keeping in view the very important principle of prevention.

All the children recommended for milk in school are kept under supervision, and the cases of those recommended on medical grounds are reviewed every six months.

The assessment of ability to pay for the milk is undertaken by the Central Aid Society, but every child recommended gets milk free of cost pending the making of an assessment. The number getting the milk free on medical grounds at the time of writing was 545.

In compliance with the desire of the Board of Education expressed in their circular 1437, pasteurised milk is supplied. Samples are examined bacteriologically every month.

TEACHING OF HYGIENE IN SCHOOL.

The teaching of hygiene varies somewhat from school to school. In the Senior Schools it is based largely on the Handbook of Suggestions for Health Education (issued in 1933 by the Board of Education), the main purpose of which is "to make the practice and study of health a constituent and vital part of the whole atmosphere of school life."

In the Infant schools it consists chiefly in the teaching of personal cleanliness and good habits. Each child has its own towel, face flannel, comb and toothbrush; hands and nails are inspected daily, the right use of handkerchiefs is taught, and in those schools where the closets are provided with a separate flush the children are taught to use it properly. In some, unfortunately, there is still a common flush for a series of closets, and here the flushing of the drains is undertaken by a monitress or the caretaker.

Until recently the senior girls attended one of the Infant Welfare Centres two or three times during their last year at school, thus gaining some idea of the activities of the centres, becoming aware of their existence and learning where and when they take place. This excellent custom has fallen into disuse, but it is hoped to revive it in the immediate future.

The Child Guidance Clinic.—The Child Guidance Clinic is not yet fully established, but has made a good start in the Psychological Out-Patients' Department at Addenbrooke's Hospital.

In July, Dr. Gillespie, a London Specialist, was invited to start the Clinic at Addenbrooke's Hospital. Difficulties, however, arose with regard to the social worker.

Dr. Gillespie considered that it would be a mistake to undertake child guidance work except on strictly orthodox lines, *i.e.*, unless a Psychiatrist, a Psychologist, and a properly trained social worker, were all available. Unfortunately funds were not forthcoming to pay a specially trained social worker.

Dr. Gillespie therefore took over the Psychological Clinic temporarily, until Dr. Noble's arrival.

The part-time services of a fully trained and experienced social worker have now been secured, but Dr. Noble quite rightly feels that the position of Psychological Medicine in Cambridge must first be consolidated before child guidance work proper is undertaken. In the meanwhile the "problem child" is referred as an out-patient to Dr. Noble, in the ordinary way.

An appreciable number of "difficult" children has already been greatly helped in this way.

It is, however, of course not possible to investigate the case quite so thoroughly as it would be were a complete child guidance unit in existence with its detailed enquiry into home conditions, and, when necessary, the possibility of conferences with school teacher, parent, and the three members of the Child Guidance Unit.

It will not be long before this most valuable aid to the proper adjustment of the "problem child" is fully established.

Physical Education.—The Cambridge Borough and County and the Isle of Ely County Council have united in the appointment of two organisers of physical education, a man and woman, who commenced their duties in September, 1934.

EMPLOYMENT OF SCHOOL CHILDREN.

The number of children examined and certified under the Bye-Laws regulating the employment of school children was 89.

There were 7 applications for a medical certificate for public entertainments.

TABLE I.—RETURN OF MEDICAL INSPECTIONS.

A. ROUTINE MEDICAL INSPECTIONS.

Number of Inspections in the prescribed Groups.

Entrants ...	...	...	...	676
Second Age Group ...	...	...	...	661
Third Age Group ...	...	...	...	746
Total				2083
Number of other Routine Inspections				Nil.

B. OTHER INSPECTIONS.

Number of Special Inspections	...	...	3713
Number of Re-Inspections ...	...	...	1414
Total			5127

TABLE II.—A. Return of Defects found by Medical Inspection in the year ended December 31st, 1934.

Defect or Disease.						Routine Inspections.		Special Inspections.		
						No. of Defects		No. of Defects		
						Requiring treatment.	Requiring to be kept under observation but not requiring treatment.	Requiring treatment.	Requiring to be kept under observation but not requiring treatment.	
Mal-nutrition						18	—	—	—	
Skin	{	Ringworm :	Scalp	...	...	1	—	—	—
			Body	...	...	4	—	—	—
	{	Scabies	3	—	5	—
	{	Impetigo	—	—	101	—
	{	Other Diseases (Non-Tuberculous)				11	12	69	1	
Eye	{	Blepharitis	...	...	...	—	2	32	—
		Conjunctivitis	...	...	...	—	—	26	—
		Keratitis	—	—	—	—
		Corneal Opacities	—	—	5	—
		Defective Vision (excluding Squint)	33	7	61	6				
		Squint	10	3	5	1
Ear	{	Other Conditions (Pink Eye 347) ...				—	1	392	—	
		Defective Hearing	...	...	...	5	23	23	4
		Otitis Media	...	...	...	1	8	27	1
		Other Ear Diseases	...	...	...	3	5	17	—
Nose and Throat	{	Chronic Tonsillitis only	...	...	...	27	373	97	28
		Adenoids only	...	...	...	1	14	5	—
		Chronic Tonsillitis and Adenoids	...	...	...	—	—	8	—
		Other Conditions	...	...	...	3	17	14	1
Enlarged Cervical Glands (Non-Tuberculous)						1	179	21	12	
Defective Speech						—	4	1	2	
Heart and Circulation	{	Heart Disease :				—	—	2	1	
		Organic	—	71	3	5
Lungs	{	Functional	4	9	14	5
		Anaemia	—	13	12	—
Other Non-Tuberculous Diseases ...						—	6	9	—	

TABLE II.—(continued.)

Defect or Disease.					Routine Inspections.		Special Inspections.	
					No. of Defects		No. of Defects	
					Requiring treatment.	Requiring to be kept under observation but not requiring treatment.	Requiring treatment.	Requiring to be kept under observation but not requiring treatment.
Tuber- culosis	Pulmonary :							
	Definite... ..				—	—	—	—
	Suspected				—	—	3	—
	Non-Pulmonary :							
	Glands				—	—	—	—
	Bones and Joints				—	—	—	1
Nervous System	Skin				—	—	—	—
	Other Forms				—	—	—	—
	Epilepsy				—	—	2	—
Deform- ities	Chorea				—	—	1	—
	Other Conditions... ..				1	8	1	—
Other Defects and Diseases (excluding Un- cleanliness and Dental Diseases)	Rickets				1	10	2	—
	Spinal Curvature				8	—	1	1
Other Forms					50	52	15	6
Total					19	30	554	3
Total					292	893	1542	82

B. Number of Individual Children found at Routine Medical Inspection to require Treatment (excluding Uncleanliness and Dental Diseases)

Group.					Number of Children.	
					Inspected	Found to require Treatment
Prescribed Groups :						
Entrants					676	65
Second Age Group					661	98
Third Age Group					746	109
Total (Prescribed Groups)					2083	272

TABLE III. Return of all Exceptional Children in the Area.

Children suffering from the following types of Multiple Defect, <i>i.e.</i> , any combination of Total Blindness, Total Deafness, Mental Defect, Epilepsy, Active Tuberculosis, Crippling (as defined in penultimate category of the Table), or Heart Disease				
Blind and Dumb	...	...	...	1
		Total	...	1
Blind Children.	Suitable for training in a School for the totally blind.	At Certified Schools for the Blind	—	
		At Public Elementary Schools	—	
		At other Institutions...	—	
		At no School or Institution ...	—	
		Total	—	
Partially Blind Children.	Suitable for training in a School for the partially blind.	At Certified Schools for the Blind	1	
		At Certified Schools for the Partially Blind	—	
		At Public Elementary Schools	1	
		At other Institutions...	—	
		At no School or Institution ...	—	
		Total	2	
Deaf Children.	Suitable for training in a School for the totally deaf.	At Certified Schools for the Deaf... ..	3	
		At Public Elementary Schools	—	
		At other Institutions...	—	
		At no School or Institution ...	—	
		Total	3	
Partially Deaf Children.	Suitable for training in a School for the partially deaf.	At Certified Schools for the Deaf	2	
		At Certified Schools for the Partially Deaf	—	
		At Public Elementary Schools	1	
		At other Institutions...	—	
		At no School or Institution ...	—	
		Total	3	
Mentally Defective Children.	Feeble-minded Children.	At Certified Schools for Mentally Defective Children ...	49	
		At Public Elementary Schools	5	
		At other Institutions...	—	
		At no School or Institution ...	—	
		Total	54	
Epileptic Children.	Suffering from severe epilepsy.	At Certified Special Schools	—	
		At Public Elementary Schools	—	
		At other Institutions...	—	
		At no School or Institution ...	1	
		Total	1	
Physically Defective Children.	(i.) Suffering from Pulmonary Tuberculosis (including pleura and intra-thoracic glands).	At Certified Special Schools	—	
		At Public Elementary Schools	—	
		At other Institutions...	—	
		At no School or Institution ...	—	
		Total	—	

TABLE III.—(continued)

Physically Defective Children. (continued).	(ii.) Suffering from Non-Pulmonary Tuberculosis other than those shown in (i) above.	At Certified Special Schools	3
		At Public Elementary Schools	—
		At other Institutions... ..	—
		At no School or Institution ...	—
		Total	3
	Delicate Children, <i>i.e.</i> , all children (except those included in other groups) whose general health renders it desirable that they should be specially selected for admission to an Open Air School.	At Certified Special Schools	104
		At Public Elementary Schools	13
		At other Institutions... ..	—
		At no School or Institution ...	—
		Total	117
	Crippled Children (other than those with active tuberculous disease) who are suffering from a degree of crippling sufficiently severe to interfere materially with a child's normal mode of life.	At Certified Special Schools	1
		At Public Elementary Schools	8
		At other Institutions... ..	4
		At no School or Institution ...	—
		Total	13
	Children with heart disease, <i>i.e.</i> , children whose defect is so severe as to necessitate the provision of educational facilities other than those of the public elementary school.	At Certified Special Schools	6
		At Public Elementary Schools	4
		At other Institutions... ..	—
		At no School or Institution ...	—
		Total	10

TABLE IV. Return of Defects Treated during the year ended 31st December, 1934.

TREATMENT TABLE.

Group I. Minor Ailments (excluding Uncleanliness, for which see Group VI.)

Disease or Defect.	No. of Defects treated or under treatment during the year.		
	Under the Authority's Scheme.	Otherwise	Total.
Skin			
Ringworm—Scalp	1	—	1
„ Body	4	—	4
Scabies	3	—	3
Impetigo	92	10	102
Other Skin Disease	74	25	99
Minor Eye Defects (External and other, but excluding cases falling in Group II.)	390	30	420
Minor Ear Defects	4	23	27
Miscellaneous (e.g., minor injuries, bruises, sores, chilblains, etc.)	391	84	475
Total	956	175	1131

Group II. Defective Vision and Squint (excluding Minor Eye Defects treated as Minor Ailments—Group I.)

Defect or Disease.	No. of Defects dealt with.			
	Under the Authority's Scheme.	Submitted to refraction by private practitioner or at hospital apart from the Authority's Scheme.	Other-wise.	Total.
Errors of Refraction (including squint)	133	—	—	133
Other Defect or Disease of the Eyes (excluding those recorded in Group I.)	—	—	—	—
Total ...	133	—	—	133

Total number of children for whom spectacles were prescribed

(a) Under the Authority's Scheme	...	...	103
(b) Otherwise	...	...	—

Total number of children who obtained or received spectacles

(a) Under the Authority's Scheme	...	...	77
(b) Otherwise	...	...	3

Group III. Treatment of Defects of Nose and Throat.

Number of Defects.

Received Operative Treatment.			Received other forms of Treatment.	Total number treated.
Under the Authority's Scheme, in Clinic or Hospital.	By Private Practitioner or Hospital, apart from the Authority's Scheme.	Total.		
80	—	80	3	83

Group IV, Orthopaedic and Postural Defects.

Under the Authority's Scheme.

Residential treatment with Education	I
Non-residential treatment at an orthopaedic clinic	51

Otherwise.

Non-residential treatment at an orthopaedic clinic	I
Total	53

Group V. Dental Defects.

(1) Number of Children who were :—

(a) Inspected by the Dentist :

Aged :

Routine Age Groups	3	40	Total	4282
	4	137		
	5	326		
	6	350		
	7	371		
	8	388		
	9	382		
	10	370		
	11	478		
	12	656		
Specials	13	539		
	14	245		

Grand Total ... 5056

(b) Found to require treatment 4295

(c) Actually treated ... 3991

(d) Re-Treated during the year 3368

(2) Half-days devoted to :—

Inspection ...	28	Total 1052
Treatment ...	1014	
Administration (including teaching)	10	

(3) Attendances made by Children for treatment ... 4469

(4) Fillings :—

Permanent Teeth	10625	Total 10788
Temporary Teeth	163	

(5) Extractions :—

Permanent Teeth	827	Total 4146
Temporary Teeth	3319	

(6) Administrations of general anaesthetics for extractions ... 18

(7) Other operations :—

Permanent Teeth	317	Total 4460
Temporary Teeth	4143	

Group VI. Uncleanliness and Verminous Conditions.

(i)	Average number of visits per school made during the year by the School Nurses	...	...	...	9
(ii)	Total number of Examinations of children in the Schools by School Nurses	...	...	...	19,706
(iii)	Number of individual children found unclean	...	...	...	662
(iv)	Number of children cleansed under arrangements made by the Local Education Authority	...	...	...	Nil
(v)	Number of cases in which legal proceedings were taken :				
	(a) Under the Education Act, 1921	...	...	...	Nil
	(b) Under School Attendance Bye-Laws	...	...	...	6

